

XXXIII.—*On the Geographical Distribution of Birds in European Russia north of the Caucasus.*—Part I. Rapaces Diurnæ. By M. MENZBIER.

IN the beginning of the year 1882 I published in Russian the first part of my work entitled 'Ornithological Geography of European Russia,' wherein I described the distribution of the Birds of Prey throughout European Russia. I wished to demonstrate clearly the limits of the distribution of the different species of birds in that country, and to show the connexion between the ornithological fauna of European Russia and that of the Palæarctic Region. My preliminary notes on that subject I have already given in the beginning of my work, and also in my article entitled "Revue comparative de la faune ornithologique des gouvernements de Moscou et de Toula," but I will give a more detailed account in the concluding chapters of my 'Ornithological Geography.'

I wish here to acknowledge my great obligations to Mr. Severtzov, who kindly placed at my disposal his entire ornithological collection and manuscripts on these subjects. I also take this opportunity of offering my sincere thanks to others of my fellow-labourers in ornithological science, especially Mr. Pleske, Mr. Alferaki, and Mr. Djakov, to whom I am greatly indebted.

NEOPHRON PERCNOPTERUS.

The Egyptian Vulture is a very rare and local bird in Russia. It breeds in the Crimea, where a few birds remain throughout the winter, and in the Government of Podolsk (in the district of Magilev); but it only occasionally visits the Government of Voronesh and the steppes of the Caspian Sea, a very few straying as far north as Sarepta and Orenburg.

VULTUR MONACHUS.

The Black Vulture is rare in Russia, where it breeds in the south-eastern and southern parts of the country, and is an accidental visitor to the western part.

It breeds in the southern and south-western Ural ranges, between the rivers Sakmara and Ik, and is sedentary in the

Crimea. Perhaps it is an accidental visitor to the Government of Voronesh; occasionally it is found in Bessarabia and throughout Western Russia south of the Baltic (Poland, Courland, Livonia).

GYPS FULVUS.

The breeding-range of the Griffon Vulture in Russia may be said to extend over the Government of Podolsk, Bessarabia, the Crimea, and the Kaslinsky Ural. The bird is very common and sedentary in the Crimea, but less common and partially migratory in the rest of its range. Occasionally it is found in the south-west and south of Russia. Mr. Taczanovsky records the Griffon Vulture as very rare, being even more rare than the Black Vulture in Poland. Twice it has been observed in the Government of Kiev, in the district of Uman. In the Governments of Ekaterinoslav, Kharkov, and Voronesh the bird is a more regular visitor; but it has only once been found near Sarepta. East of the Volga the Griffon Vulture is more common in the Obschy-Syrt. In the Ural Mountains it strays as far north as Pavda.

Pallas did not find the Griffon and Black Vultures in the Ural Mountains, nor according to Eversmann were they found either in the Ural Mountains or their branches during the ten years from 1820 to 1830. Since the latter year these Vultures have been found in the above-mentioned countries, having become more and more common of late years, and since 1850 both species have been generally distributed in the southern Ural Mountains. Mr. Pleske informs me that *Vultur monachus* was not uncommon there during the years from 1869 to 1873. *Gyps fulvus* was observed by this gentleman several times during those years at Orenburg and about the river Danghuz. Mr. Sabaneev's observations on the breeding of the Griffon Vulture in the Kaslinsky Ural were made also after the year 1865.

HYPOTRIORCHIS SUBBUTEO.

The Hobby is a well-known breeding bird in all the wooded districts of Russia south of lat. 65°, but in Finland its northern breeding-limit is about lat. 64°.

It is very common in all the northern and central portions of the country, more rare about the northern limits of the southern steppes, and only local in the last-mentioned locality. In the valley of the Lower Volga it breeds as far south as the mouth of that river, but it is not known to winter in any part of Russia.

FALCO PEREGRINUS.

The Peregrine Falcon is so variable in its dimensions and shades of colour that it is very difficult to distinguish the types in their variations. An attempt was made by Pastor Chr. L. Brehm, who established four types of *Falco peregrinus*—*F. p. abietinus*, *F. p. cornicum*, *F. p. griseiventris*, *F. p. leucogenys*; but Brehm's types of the Peregrine Falcon have not been accepted in science. In the course of several years I have examined nearly 300 specimens of the Peregrine Falcon from different parts of the Old World, and, judging from these, I should say that in the Northern Palæ-arctic Region we have two specifically distinct forms of the Peregrine Falcon, these forms being very distinct from each other in their different ages, and having geographical ranges, comparatively, very clearly defined: these are *Falco peregrinus* and *F. leucogenys*. I am convinced also that the specimens of *F. peregrinus* from Western Europe are very variable in character, and that specimens of this bird from Russia and Northern Asia are more constant. So far as I can judge from the examples which I have examined, there are three races of the Peregrine Falcon existing on the continent of Europe and the northern half of Asia—*F. p. griseiventris*, *F. p. cornicum*, and *F. p. brevirostris*, the first two of which were described thirty years ago by Brehm, and the last-mentioned by me two years ago.

I now propose briefly to describe the principal characters of plumage which I have found in the three above-mentioned races of *F. peregrinus*.

(A) FALCO PEREGRINUS GRISEIVENTRIS.

Adult male. Above delicate bluish grey, only indistinctly barred with dark grey on the rump and with darker-coloured

head, neck, and the upper part of the mantle; forehead whitish; cheeks, ear-coverts, and moustaches blackish grey; the chin and throat spotless white, with a tinge of pale yellow on the throat; the breast and the abdomen more or less yellow with a tinge of grey, more darkly developed on the flanks, and paler on the under tail-coverts, axillaries, and under wing-coverts; the spots, reduced to mere triangular dots, exist only here and there on the middle portion of the under breast, abdomen, and thigh-coverts; on the sides, axillaries, and under wing-coverts they are replaced by narrow arrow-head bars; under tail-coverts spotless, or only with faint traces of bars. The very adult bird has nearly the whole under surface of the body spotless, with a deeply developed tinge of grey.

Adult female. Similar to the adult male, but more deeply coloured, and with more developed spots and bars on the under surface of the body.

Young male. Above dark brown, with the exception of the head, which is paler; forehead whitish; crown of head brown tinged with pale rufous; a broad streak from the hind part of the eye to the nape, and the whole of the latter whitish with a few dark brown spots; all the feathers of the back dark brown, margined with pale rufous; cheeks, ear-coverts, and moustaches dark brown; under surface of the body whitish, with longitudinal spots of brown on the throat, breast, abdomen, flanks, and thighs, and with bars on the under tail-coverts.

Young female. Similar to the young male, but much larger.

According to Pastor Chr. Brehm *Falco peregrinus griseiventris* breeds throughout Scandinavia (probably occasionally in the plains and not in the mountains, where it is replaced by a small variety of *F. p. cornicum*), and is found in Northern Germany on migration. It does not breed in Central Russia, but visits that country during the spring and autumn. A very typical specimen of that bird from Novaja Zemlja is in the Museum of Vienna. Two specimens, male from the mouth of the Ussuri river and male from Kultuk, were presented by Messrs. Dybovsky and Gadlevsky to the Museum

of Warsaw. The same variety of the Peregrine Falcon was obtained by Colonel Prejevalsky in the country about the river Ussuri; but in Mandshuria it is replaced by the other variety, which is nearly as dark as *Falco melanogenys*. It is the same race, which, according to Messrs. Middendorff, Finsch, and Russov, breeds *on the ground* in the tundra and in the marshes of the wooded country of Livonia. Probably *F. p. griseiventris* breeds throughout the whole tundra and wooded country ("forest") from Greenland to the Amoor country, migrating during the winter more southwards, as far as the Antilles, Southern Europe, Egypt, and India. Specimens of this race from Greenland, the Antilles, Southern Europe, and India are now preserved in the British Museum. A specimen of this race, in change from the first to the second year's plumage, obtained (in winter) near Lake Menzaleh, Egypt, is now preserved in the Museum of Vienna. Two specimens of it, obtained in the Crimea, are now in the Museum of Moscow; a third skin (♀ juv.) of that race was obtained $\frac{22}{10}$ XI. in the Gardens of Tashkent, and a fourth (♂, $\frac{23}{11}$ I.) in Ferghana (coll. of Mr. Severtzov).

Respecting the distribution of this bird in European Russia I can state as follows:—Novaja Zemlja; according to Mr. Hoffmann, an adult female and young ones were found near lat. 68°; by Messrs. Seebohm and Harvie-Brown the Peregrine Falcon was observed at Ust-Zylma, on the banks of the river Zylma, and at Stanovaja-Lachta. It is not uncommon breeding near Archangel, and more rare in Lapland. More to the south it is found in Finland, in the Government of St. Petersburg, Esthonia, and Livonia; but I do not know whether this race breeds in the Government of Tver, and I cannot find anything recorded of it in the Governments of Olonetz and Vologda. More to the east it breeds in the Governments of Wjatka and Perm.

During the autumn, winter, and spring *F. p. griseiventris* visits the Governments of Central and Southern Russia, but young are more commonly found than adults.

(B) *FALCO PEREGRINUS CORNICUM*.

Adult male. Above very dark ; the head, neck, upper part of the mantle, cheeks, ear-coverts, and moustaches slate-black ; the rest of the upper surface slate-blue, barred with dusky slate-colour ; under surface of the body very rufous, with prevalent grey tint on the flanks, abdomen, and thighs. Chin spotless ; throat with longitudinal spots of black ; breast, abdomen, flanks, and thighs crossed with blackish bars, taking the form of spots in the centre of the breast ; under wing-coverts blackish grey, spotted with ferruginous buff. With the advance of age the rufous colour on the under surface of the body becomes more intense, and neither spots nor bars disappear, though they decrease.

Adult female. Similar to the adult male, but more deeply coloured, and with more developed spots and bars on the under surface of the body.

Young male. Above blackish brown, with a wash of grey ; crown of head brown, tinged with rufous ; nape blackish brown, mottled with rufous ; cheeks, ear-coverts, and moustaches black ; under surface of the body deep rufous ; chin with narrow indistinct shaft-stripes ; throat, breast, and abdomen with large longitudinal spots of black-brown ; flanks and thighs with transverse spots ; under tail-coverts barred.

Young female. Similar to the young male, but much larger.

According to Pastor Chr. Brehm *Falco peregrinus cornicum* breeds throughout the central portion of Europe, straying during winter as far south as Egypt. I have seen many specimens of this race obtained from the mountain-country of Germany, Switzerland, Northern Italy, and Eastern France.

In European Russia it breeds in the Ural Mountains, in the Governments of Perm and Orenburg, on the rocks on the rivers Belaja, Kama, and the Middle Volga, and in the Governments of Kazan and Simbirsk. More west and south it is only an accidental visitor during autumn and winter.

Examples of *F. p. cornicum* from the Ural are much darker

than those from Central and Western Europe, and nearly as dark as *Falco atriceps* from North-western India.

After a careful examination of several specimens of the Peregrine Falcon from Scandinavia, preserved in European Museums, I am convinced now that *F. p. abietinus* is only a small variety of *F. p. cornicum*, replacing it in the mountain-country of Sweden and Norway.

(C) *FALCO PEREGRINUS BREVIROSTRIS.*

This race of the Peregrine Falcon generally is larger than the others, in comparison with which it has a shorter and larger bill.

Adult male. The colour of the upper part of *F. p. brevirostris* is intermediate between that of *F. p. griseiventris* and *F. p. cornicum*, this race being more deeply coloured than the former and more clearly than the latter.

Above bluish grey, with darker-coloured head, which is streaked with narrow shaft-stripes of blackish ash; back and wing-coverts barred with dark grey; cheeks and moustaches blackish grey, the former clearer than the latter; under surface of the body white, tinged with rosy yellow on the throat and breast, and with delicate grey on the abdomen, flanks, and thighs; chin spotless; throat with narrow longitudinal spots of black; breast, abdomen, flanks, and thighs crossed with narrow bars of blackish, taking the form of spots in the centre of the breast and abdomen; under wing-coverts blackish grey spotted with whitish. With the advance of age the white colour on the under surface of the body becomes more and more pure, the spots and bars nearly disappear, and the quite adult bird has nearly the whole surface of the body spotless, only with a faint trace of grey.

Adult female. Similar to the adult male, but much larger.

Young male. Generally similar to the young male of *Falco peregrinus cornicum*, but not so deeply coloured, and with a whiter nape.

Young female. Similar to the young male.

This race of the Peregrine Falcon is resident in Central Russia, where it breeds in the large woods of all the Govern-

ments, being common during the winter in towns. More to the west I found the same race of the Peregrine Falcon breeding in Poland, in the eastern parts of North Germany, in the plains of the Danube, and in Lombardy. But in the plains of Scandinavia, in Southern Germany, Lombardy, France, the British Islands, Spain, and the other parts of Middle and Western Europe specimens intermediate between *F. p. cornicum* and *F. p. brevirostris* are more common, which are unknown in Russia. East of European Russia this race breeds in some parts of Western Asia. During the winter it is found as far east as China and as far south as Ceylon, India, Arabia, and the Crimea (specimens preserved in the British Museum and in the collection of Mr. H. Seebohm).

Concisely, the differences between the three above-mentioned races of the Peregrine Falcon are as follows :—

<i>F. p. griseiventris.</i>	<i>F. p. cornicum.</i>	<i>F. p. brevirostris.</i>
Above delicate bluish grey; cheeks and moustaches blackish grey; chin and throat spotless white, with a tinge of pale yellow on the throat; the rest of the under surface of the body with a deeply developed tinge of grey, and only with traces of spots on the middle portions of the under breast, abdomen, and thighs, replaced by narrow bars on the flanks, axillaries, and under wing-coverts.	Above very dark; cheeks and moustaches slate-black; under surface of the body, with the exception of the chin, very rufous, with a prevalent grey tint on the flanks, abdomen, and thighs; chin spotless, the rest of the under surface very spotted and barred; under wing-coverts blackish grey spotted with ferruginous buff.	Above bluish grey; cheeks and moustaches blackish grey, the former clearer than the latter; under surface of the body white, tinged with rosy yellow on the throat and breast, and with very delicate grey on the abdomen, flanks, and thighs; with the advance of age the spots and bars on the under surface of the body nearly disappear; under wing-coverts blackish grey spotted with whitish.

FALCO LEUCOGENYS.

In its colouring, dimensions, and geographical range *Falco leucogenys* is intermediate between *Falco peregrinus* and its more southern representatives, *Falco barbarus*, *F. feldeggii*, *F. tanypterus*, &c.

Concisely, the differences between *Falco peregrinus* and *Falco leucogenys* are as follows :—

F. peregrinus.

Very massive; feathers underneath the eye dark, confluent with a broad moustachial band; pale patches on the nape, which disappear with the advance of age; very variable in shades of colour, but more clearly coloured specimens have the breast and abdomen either white or tinged with grey.

F. leucogenys.

Very elegant; feathers underneath the eye unspotted fulvous or only with brownish-grey traces, clearly defined from a narrow moustachial band; the nape mottled with fulvous during its whole life; very constant in the shades of colour, clear bluish grey above, white tinged with fulvous on the under surface of the body.

The following is a more detailed description of *Falco leucogenys* :—

Adult male. Above clear bluish grey, only indistinctly barred with darker grey and with paler-coloured lower back, rump, and upper tail-coverts; the forehead whitish; the nape mottled with fulvous; the feathers underneath the eye unspotted fulvous or only with brownish-grey traces; a narrow moustachial band dark bluish grey; tail bluish grey, tinged with brownish and barred with darker grey (seven transverse bars); quills dark brown, externally shaded with grey; chin white; rest of the under surface tinged with fulvous, the throat unspotted, the breast and abdomen only with traces of bluish-brown spots, inclining to narrow bars on flanks and under tail-coverts; thighs tinged with blue and mottled with transverse spots; under wing-coverts creamy white mottled with brown; axillaries white barred with brown.

Adult female. Similar to the adult male, but more deeply coloured above and more spotted on its under surface. The nape mottled with fulvous, as in the adult male.

Young male. Above brown; the forehead whitish; crown brownish fulvous, with conspicuous margins of fulvous; the nape and hind neck pale rufous mottled with brown; the back, rump, scapularies, and wing-coverts brown margined with rufous, the upper tail-coverts brown barred with rufous; tail greyish brown, edged and barred with pale rufous; quills

dark brown, edged and spotted on the inner web with pale rufous; feathers underneath the eye unspotted fulvous, or only with brownish traces; a narrow moustachial band dark brown; chin unspotted fulvous; rest of the under surface fulvous, the throat, breast, abdomen, flanks, and thighs with brown streaks, the under tail-coverts irregularly barred with brownish; under wing-coverts brown, broadly margined and spotted with clear buff.

Young female. Similar to the young male, but much larger.

After the first moult *F. leucogenys* takes a plumage which differs from that of the adult in being more spotted on the under surface of the body, and having the upper tail-coverts rufous, tinged and barred with greyish blue.

This Falcon breeds probably throughout all the steppes, from the Middle Danube to the Altai Mountains, migrating during the winter as far south as Egypt and India.

I do not know whether this species breeds in Lombardy, but I saw a young specimen, obtained in Piedmont, in the Museum of Turin. More to the east it breeds throughout the plains of the Danube (from which I know of two specimens in the Museum of Vienna), and in the Dobrudscha (a specimen in change from the first to the second year's plumage, obtained in the Dobrudscha, is preserved in the collection of Mr. Alléon), in Southern Russia (specimens in the Zoological Museum of Moscow, in my collection, and in the collection of Mr. Severtzov), and in Western Siberia (the Zoological Museum of Moscow and the collection of Mr. Severtzov).

Some specimens of this species remain all the year round in their breeding-quarters, others migrate southwards during the winter. In the Museum of Vienna I saw some specimens of *F. leucogenys* from Egypt, obtained during the winter near Lake Menzaleh. A specimen obtained at Lenkoran (Transcaucasia) is now preserved in my collection. Others, obtained at Chimkent, in the country of the Lower Amou-Darya, near Issyk-kul, and in Ferghana, are to be seen in the Zoological Museum of Moscow and in the collection of Mr. Severtzov. Two young specimens, from Babylon and Northern India, I saw in the British

Museum. This form has been found several times in Northern Germany and Central Russia, but is there very rare and occasional.

HIEROFALCO ISLANDUS.

A specimen of the Iceland Jer-Falcon was obtained in April 1863 near Dorpat.

HIEROFALCO GYRFALCO.

The Brown Jer-Falcon is common and resident only about the Varanger Fiord, near the coast of Murman and Lake Enare. More to the south it occasionally breeds in Lapland, but is only a rare and accidental visitor to the other parts of Russia, as far to the south-east as the central Governments, though it is said that exceptional cases are found of its breeding on the rocks of the Baltic Sea near the coast of Esthonia.

Since the year 1860 a specimen of this bird has been obtained in the district of Jamburg (in the Government of St. Petersburg), and Mr. Russov once saw this bird upon the Neva in St. Petersburg. Several times the Brown Jer-Falcon has been found in the Baltic provinces and in Poland; and according to Mr. Djakov it is very possible that the same species was observed during the winter in the Government of Tver. Once or twice this bird has been found during the winter season in the Government of Tula, and once at the end of autumn in the Government of Riazan.

HIEROFALCO URALENSIS.

The Ural Jer-Falcon is a very interesting intermediate race between the Arctic Jer-Falcon, Brown Jer-Falcon, and Henderson's Jer-Falcon. The immature examples of this race in their first plumage are intermediate between specimens of a corresponding age of *Hierofalco gyrfalco* and adult *Hierofalco hendersoni*; but the adult is very light, nearly white, and is intermediate between the grey and white arctic race. This form will be more fully described in Mr. Severtzov's and my monograph of the Jer-Falcons.

On the distribution of this Falcon in Russia we have the following notes. According to Mr. Meves the Brown Jer-

Falcon breeds on the Kanin peninsula, and I think that the *H. gyrfalco* of Mr. Meves is really *H. uralensis*. Mr. Goebel informs us that it is resident near Pinega. Probably it is the same species which was observed several times on Novaja Zemlja. According to Hoffmann the Ural Jer-Falcon breeds near Ust-Ussa (lat. 66°). On the authority of Mr. Sabaneev it is found in the districts of Krasnoutimsk and Ufa, but is no longer met with in the districts of Karslinsk and Kashtym, where it was formerly known. According to Eversmann the Ural Falcon used to breed from 1850 to 1860 in the mountains near the Belaja river, and probably breeds there still. Dr. Finsch met with a specimen, which probably was the Ural Jer-Falcon, near Perm. During the winter the bird has been obtained as far south as the Government of Orenburg and the Obschy-Syrt, and as far west as the Governments of Vladimir and Orel.

HIEROFALCO SAKER.

The Saker Falcon breeds regularly in the steppes of Southern Russia, and occasionally in the southern and eastern portions of Middle Russia; but it is a rare and accidental visitor to the central portions of the country, and has never been obtained in the northern Governments.

According to Mr. Sabaneev it is found in the districts of Kamischlov and Shadrinsk. In the branches of the Ural as well as in the steppes near them it is not uncommon. In the steppes near the Ural river, the Middle and Lower Volga, this bird is not rare, still breeding there on the islands of the Volga and in the Sarpa hills. But at Astrakhan the Saker is rare and probably only found during migration, though more to the south, in the valleys of the Terek and the Kuban, it is said by Bogdanov to be common. It breeds and is not uncommon in the Governments of Saratov, Voronesh, Khar'kov, Kiev, and Chernigov, has been several times observed in the Government of Kazan (probably only in the southern part of that country) and Tula, and still breeds in the Government of Orel; but we do not know the distribution of this bird in the Governments of Riazan, Tambov, and

Kursk. It was formerly a common breeding bird in the Government of Podolsk, where it has become rare during the last twenty-five years; but it is only a rare and accidental visitor to Litva, and, according to Mr. Taczanovsky, has never been obtained in Poland. In the steppes of New Russia and in the Crimea this bird is rare, being resident there in the mountains and on the southern coast of the Crimea.

Mr. Seeböhm, on the authority of Mr. Henke, states that the Saker Falcon has been once obtained near Archangel in winter, and breeds on the Kanin peninsula. But this is without doubt a mistake; according to Mr. Meves the Brown Jer-Falcon* breeds on the Kanin peninsula, and it is very possible that Mr. Henke has taken the young specimen of the Brown Jer-Falcon for the Saker.

LITHOFALCO ÆSALON.

The Merlin breeds regularly throughout the northern, and occasionally in the central portions of Russia; but on migration and during the winter it has been observed in the whole southern half of that country.

According to Mr. Mela it breeds in all parts of Lapland and Finland, from the Gulf of Finland to the Varanger Fiord; but there it is rare southwards from lat. $62\frac{1}{2}^{\circ}$. It is more common near the Ladoga Lake, in the country near the Onega Lake and on the Dvina, and was found by Messrs. Seeböhm and Harvie-Brown in the valley of the Lower Pechora (on migration it is there very common near Ust-Zylma, lat. $65^{\circ} 26'$). In the Ural Mountains at present we know its breeding-range only as far north as lat. 57° , but without doubt it will be found there still further north. It breeds in the district of Ekaterinburg (in the Government of Perm), and probably also in the Governments of Kazan and Riazan. It breeds and is not uncommon in the Governments of Vologda, Jaroslav, Vladimir, Moscow, Tver, and Pskov, and rarely in the Government of St. Petersburg and in

* I think it more likely that the lightly-coloured eastern representative of *H. gyrfalco*—*H. uralensis*—breeds on the Kanin peninsula.

the Baltic provinces. It is still rarer and only accidentally breeds in the Governments of Grodno, Chernigov, Smolensk, and Tula (only in the northern part of the last).

On migration the Merlin is common in the Baltic provinces, in Poland, in the Governments of Podolsk and Kiev, rare in the Governments of Kharkov and Voronesh, more common in the Governments of Simbirsk and Astrakhan.

During the winter this bird has been seen in the Baltic provinces as well as in all the central Governments (in the Governments of Jaroslav, Vladimir, Moscow, Riazan, Tula, and Smolensk), and not uncommonly in Southern Russia. It has been observed in winter also near Astrakhan and in the Crimea.

ERYTHROPUS VESPERTINUS.

The Red-footed Falcon is distributed throughout the whole of Russia south of lat. 65° ; but is only an accidental visitor to Finland. In the northern part of its breeding-range it probably has become more common during the last forty or fifty years, that country having previously been too wooded to suit it. According to Mr. Teplooonchov the Red-footed Falcon is not uncommon in the Ural Mountains as far north as lat. $58\frac{1}{2}^{\circ}$, and probably breeds near the Obva river. On the Ural expedition this bird was observed near Perm; according to Mr. Lilljeborg and others it is very common in the neighbourhood of Kargopol; but its northern breeding-limit from Perm to Kargopol is unknown. Mr. Henke records it as breeding in a colony on an island near Kholmogory, on lofty oaks, and it is still common near the Sego Lake and Lake Onega; but it is rare on the north coasts of Lake Ladoga, only very few straying as far north-west as Torneo and the central portions of Finland (it has been more common since the year 1867). It is one of the rarest breeding raptorial birds in the Baltic provinces, and is much scarcer in some localities of those provinces, as Courland and the Government of Vilna. In Central Russia, as far east as the Oka river, the Red-footed Falcon has become very rare during the last few years; but it was common

there ten or fifteen years ago. It is not uncommon in the country between the Oka and Volga, and is very common in the Governments of Samara, Uta, and Orenburg. After 1875-76 it became very rare in some portions of the last-mentioned Government; for example between Orenburg and Orsk. It is rare on the Lower Volga (Mr. Henke occasionally found it breeding north of Astrakhan), and not uncommon in the Government of Stavropol. On the authority of Mr. Severtzov this bird bred commonly near the Biting river (in the Government of Voronesh) from the year 1840 to 1850, but is very rare there now. I saw it occasionally in the district of Ladonsk (in the same Government) during the summer of 1880. From the year 1830 to 1850 this Falcon was very common in the Government of Kharkov and in the steppes of the Black Sea; but I found it rare in that country during the summer of 1832, though it is still a common local bird in the Government of Kiev. According to Messrs. Shatilov and Radde this bird breeds rarely in the steppe of Tamak, in the Crimea.

On spring and autumn migration the Red-footed Falcon is now exceedingly common in the central and southern portions of Russia, and has, I think, migrated from the last-mentioned countries more northwards only during the last forty or fifty years.

CERCHNEIS CENCHRIS.

The Lesser Kestrel breeds only in the steppes of Southern Russia. According to Eversmann it is not rare in the steppes of the southern branches of the Ural, and Mr. Severtzov has furnished me with some very interesting notes on the history of that bird during the last twenty-five years in the Government of Orenburg. On the authority of Mr. Severtzov, the Lesser Kestrel was rare in the steppes near the Upper Ural river in the year 1860, and at the same time the Red-footed Falcon was very common there. Fourteen years after, in 1874, the bird became more common in the above-mentioned country, though generally it was not very numerous, and in that year the Red-footed Falcon was as common as before.

Three years after, in 1877, the Red-footed Falcon became very rare in some parts of the steppes of Orenburg, and the Lesser Kestrel became exceedingly common; thousands of the latter species were found by Mr. Severtzov upon the telegraph-wires on the wayside between Orenburg and Orsk. There is no doubt that some connexion exists between the numbers of these species; but we do not know whether the Lesser Kestrel has become more common since the migration of the Red-footed Falcon into the steppes of Orenburg, or if the latter has become rarer since the migration of the Lesser Kestrel into that country.

Near the Middle Ural river and the Lower Volga the Lesser Kestrel is not common; but it breeds throughout the whole country as far south as the delta of the Volga. At the end of August (old style) 1881, during my journey with Mr. Severtzov in the Khrenovskaja steppe (in the Government of Voronesh), there was obtained a young Lesser Kestrel (♂), the first specimen of that bird shot there during nearly forty years. But more to the south, in the steppes of the Government of Stavropol and near the northern slopes of the Caucasus, the bird is said to be very common. More to the west the Lesser Kestrel breeds in the steppes of New Russia and Bessarabia, in the Governments of Kiev, Podolsk, and Volhynia, and is still to be found in the south-eastern portions of Poland. According to Mr. Taczanovsky it is not an uncommon local bird in the Government of Lublin and near Radom; but is not found as far northwards as the latitude of Warsaw. It breeds in the Crimea, and a few stay there through the whole year.

TINNUNCULUS ALAUDARIUS.

The Kestrel is distributed throughout the greater part of Russia; but it is very common only in the middle and southern portions of that country.

In Finland this bird is found as far north as lat. 68°, but near its northern limit it is very rare; it is more common near the Gulf of Bothnia, and very common in the southern part of Finland. About Sego Lake, Lake Onega, and from

there to the Dvina it breeds everywhere, but it is only an accidental visitor to the neighbourhood of Archangel. In the country about the Dvina its breeding-limit is north-eastern instead of northern; in that country it goes from Archangel to Ustug, from N.N.W. to S.S.E., and only from Ustug to the Upper Kama it is again northern. In the last-mentioned country the breeding-limit of the Kestrel follows nearly lat. 61° - 60° . In Russia this bird is well known, except in the Kola peninsula and in the country near the Mezen river and the Pechora; but we believe that the obstacle to its breeding in these localities is the severity of the climate and the not sufficiently wooded character of the country. In all the central portions of Russia, as well as in the southern Governments, the Kestrel is very common. Near Astrakhan, in Bessarabia, and in some parts of the southern steppes it remains through the winter.

PANDION HALIAETUS.

The Osprey breeds throughout the whole of Russia from the Arctic Ocean to the Black Sea, the Caucasus, and the Caspian Sea; but it does not like close proximity to man, and for that reason is rare in the thickly populated districts. Another peculiarity of its distribution is that it must always be near water; and from these two causes it naturally follows that this bird is common only in a few parts of Russia; in general our country is poor in suitable localities for the Osprey.

It is common about the lakes of Finland, in the wooded country between the Gulf of Finland and the Upper Dnieper, on the lakes of the south-eastern slope of the Ural Mountains, and in a few other localities. It is rare in the central and southern portions of Russia.

It does not breed in the Crimea, but visits that country on migration.

CIRCAETUS GALLICUS and CIRCAETUS ORIENTALIS.

The Common and Steppe Short-toed Eagles are distinct from each other in their different ages, and in their geogra-

phical ranges present at least two races. The former has during its whole life a brown throat; the throat of the latter is always white, only streaked with shaft-stripes of brown. The former breeds throughout the region of "island woods"*; the latter is a bird of the steppes, where woods are very rare. But this difference of the breeding-ranges of the two birds exists only in Russia, and in that country I do not know that specimens of intermediate character between *C. gallicus* and *C. orientalis* occur; whereas near the Mediterranean the two races breed together, and specimens of intermediate character are very common. I think they are produced by the interbreeding of the two races.

The geographical distribution of these forms in Russia is as follows:—*C. gallicus* breeds throughout all the woods of Central Russia and on the western borders of the steppes, as far east as Semirechje: it is not uncommon about Vernoje. In Western Russia this bird breeds in Livonia, and has been found during the summer in Esthonia, as well as in the Government of St. Petersburg; but we do not know if it breeds in the two latter provinces. To the east the northern limit of distribution of *C. gallicus* is the Upper and Middle Volga as far as the mouth of the Kama; but it does not breed so far north, and is very rare in the country near the Volga. It is more common south of lat. 55°, common in Western Russia, rarer eastwards from the Dnieper. In Southern Russia it is found in Bessarabia, and in the Governments of Podolsk, Kiev, and Kharkov, and probably occasionally breeds throughout the whole country from the Governments of Tambov and Voronesh to the Ural.

C. orientalis is found at present in the steppes near the Ural river, near the mouths of the Volga and the Don, and in the steppes of New Russia; it is rare everywhere.

PERNIS APIVORUS.

The Honey-Buzzard breeds regularly in all the well-wooded

* This term signifies woods surrounded by plains or fields, being a literal translation from the Russian.

districts of Northern and Central Russia ; but it is a very local bird in the southern part of the country, and is only found on migration in the extreme south.

It is rare in Finland, where it is found as far north as lat. 66°, and very rare near Archangel. In the country between the Dvina and the Kama its northern breeding-limit is unknown ; but in the Government of Perm it is found only as far north as lat. 58°. It is common in Southern Finland, in the country near Lake Onega, in the Government of Ufa, and in Central Russia ; but occurs only occasionally in the Baltic provinces and in Poland. In very large forests near Lake Peipus and in the wooded country of West Russia (Belorussia and Litva) this bird is not common. In the Ural branches, in the Government of Simbirsk, and westwards from the Don in the wooded districts of Little Russia and in the wooded river-valleys of New Russia, the Honey-Buzzard is very rare, though it breeds there as well as in the Pruth valley, Bessarabia. According to Mr. Severtzov, it was very rare in the Government of Voronezh until 1860 ; since that year it has become more common in the country, and now breeds there in all the forests which are large enough to afford it a retreat.

Near the mouth of the Ural river, at Sarepta, and in the Crimea the Honey-Buzzard has been only seen on migration.

BUTEO VULGARIS.

After a careful examination of many specimens of Buzzards from different portions of Russia, I am now firmly convinced that, contrary to the opinion of most ornithologists, the Common Buzzard is found only in the western and south-western parts of Russia, and that more northwards and eastwards it is replaced by the African Buzzard (*Buteo vulpinus*), its breeding-range in Russia being nearly the same as that of the Red Kite and Barn-Owl.

Without doubt the Common Buzzard breeds in the following localities of Russia:—in the Baltic provinces, in Poland (where it is common as far east as the Vistula and is rare eastwards from the Vistula, though it is still found in the

district of Slonim, in the Government of Grodno), in Bessarabia, and near the borders of the latter country.

Near the east limit of the above-mentioned countries specimens are very common which are intermediate between the Common and African Buzzard, both in colouring and in dimensions. I think they are produced by the interbreeding of the two species.

I do not know for certain if the Common Buzzard breeds in Finland; but it is very possible.

BUTEO VULPINUS (*Buteo desertorum* auctor. plurim., nec *Buteo cirtensis*, Levaill. j.).

The African Buzzard is distributed throughout the whole of Russia. It breeds everywhere in the wooded country of Northern Russia, where the forests are more or less cut down (for example in the country between the Upper Volga and the mouth of the Dvina), is very common throughout Central Russia, and is not uncommon in the woods of Southern Russia; but it is not found either in the thickly wooded country of the Pechora or in the woodless southern steppes.

I have not seen specimens of the African Buzzard from Finland; but specimens of *Buteo* obtained by Mr. Sandeberg near Lake Onega being typical *B. vulpinus*, it is possible that throughout Finland both species breed—*B. vulpinus* as well as *B. vulgaris*. The western breeding-limit of the African Buzzard is nearly the same as the eastern breeding limit of the Common Buzzard, but only approximately. *B. vulpinus* occasionally breeds in the eastern portions of the range of the Common Buzzard, and the latter is a local breeding bird in the western portions of the range of the African Buzzard. The western breeding-limit of *B. vulpinus* near the Baltic Sea is the Vistula; but occasionally this bird visits the eastern portions of Northern and Southern Germany, having been found there more often during the last fifteen years. In the south-western portion of Russia also the two above-mentioned Buzzards are found together, interbreeding there as in the more northern parts, and the African Buzzard is not uncommon on the western shores of

the Black Sea. Eastwards from the Ural Mountains the African Buzzard is distributed as far as Semirechje, being found breeding near Wernoje and near the Issyk-kul, where it meets with the Japanese Buzzard.

The African Buzzard is found in the Crimea and near Gurjev only on migration.

BUTEO FEROX.

The breeding-range of the Long-tailed Buzzard in Russia is still insufficiently known. It is a common breeding bird in the steppes near the Caspian Sea; but its northern and western breeding-limits are unknown. Mr. Severtzov has been told that in the country between the Ural and Flek rivers *Archibuteo lagopus* breeds; but Mr. Severtzov thinks that it is *Buteo ferox* which breeds there, whilst *Archibuteo lagopus* only visits that country during its winter migration. Mr. Sabaneev supposes that *Archibuteo lagopus* breeds in the district of Shadrinsk but this is probably a mistake. According to Mr. Henke the Long-tailed Buzzard is rare in the steppes between the Ural river and the Lower Volga, but is common west of the Volga. Mr. Severtzov obtained a specimen of this Buzzard in the steppe near the Biting river on autumn migration; and I have seen a specimen of it obtained $\frac{16}{4}$ December 1854 in the Crimea (Tamak), which is preserved in the Zoological Museum of Moscow. In Paris, in the excellent collection of Mr. Alléon, I saw three specimens of this bird obtained by that gentlemen in the Dobrudscha ($\text{♀ } \frac{4}{\text{IX}}$ 1882, $\text{♀ } \frac{1}{\text{X}}$ 1882, $\text{♀ } \frac{3}{\text{X}}$ 1882), and a fourth from the neighbourhood of Constantinople ($\frac{14}{\text{XI}}$ 1874). From these circumstances we infer that it is very possible that the Long-tailed Buzzard breeds in some parts of the steppes of Southern Russia west of the Don.

ARCHIBUTEO LAGOPUS.

The principal breeding-ground of the Rough-legged Buzzard is on the tundras beyond the wooded region, where only cover of birch and willow is to be found; but it is also a local breeding bird more to the south.

In Northern Russia the bird is common about the Varanger Fiord, on the coast of Murman, near Lake Enare, and generally in Lapland; and not uncommon in the tundras of the north-eastern country, from the Kanin peninsula throughout the Lower Pechora to the northern branches of the Ural. This Buzzard also breeds occasionally in many parts of the wooded country as far south as lat. 56° —a very interesting fact in the history of the Russian avifauna. It breeds, for example, near Lake Sego, near the Dvina, in the Government of Vologda. This bird has been found but rarely in the breeding-season in the Government of St. Petersburg, and, according to Mr. Russov, breeds irregularly in the Baltic provinces. Mr. Sabaneev says that the Rough-legged Buzzard breeds in the north-eastern portions of the Government of Jaroslav, and I have been told that it breeds in some parts of the Government of Vladimir (56°).

According to Mr. Bogdanov it is possible that it breeds in the districts of Syzran (in the Government of Simbirsk) and Belebejev (in the Government of Ufa) (lat. 54° – 53°).

On the autumn and spring migration the Rough-legged Buzzard is a common visitant to Middle Russia, where a few specimens remain all the winter through; but its winter-quarters are in Southern Russia, where it strays as far south as the mouth of the Volga and the Crimea.

AQUILA FULVA, *AQUILA CHRYSÆTOS*, and *AQUILA NOBILIS*.

After a careful examination of many specimens of the Golden Eagle from different parts of the Palæarctic Region, Mr. Severtzov established three typical forms of this Eagle:—

<i>Aquila fulva.</i>	<i>Aquila chrysaetos.</i>	<i>Aquila nobilis.</i>
The young of <i>A. fulva</i> have the white on the base of the tail, but this character disappears with the advance of age, and the tail of the adult Eagle is dark.	The young of <i>A. chrysaetos</i> have not the white on the base of the tail; the tail of the young Eagle is as dark as that of the adult.	The white on the base of the tail is a permanent character of the young and adult of <i>A. nobilis</i> .

The first form of the Golden Eagle (*A. fulva*) does not

breed in Russia, but near the western limit of the country in the Carpathian Mountains*.

The second form of the Golden Eagle (*A. chrysaëtos*) is distributed throughout the whole wooded country of North Russia as far west as Sweden, and as far east as Lake Baikal. The southern breeding-limit of this species is as follows:—

In the Baltic provinces *A. chrysaëtos* breeds as far south as the Dvina river; more east, in the Government of Vitebsk, its breeding-limit crosses that river and comprises the whole wooded country of Litua. From there the southern limit of the breeding-range of *A. chrysaëtos* goes across the Dnieper northwards from Kiev (near lat. 52°), across the Desna river northwards from Chernigov and across the Oker between the towns Orel and Kaluga (near lat. 53°). More to the east the breeding-limit of *A. chrysaëtos* is insufficiently known; it probably breeds throughout the large woods of the northern parts of the Governments of Tambov and Pensa, along the right coast of the Oka, and between the mouths of the Oka and Kama. From the mouth of the last-mentioned river the southern breeding-limit of *A. chrysaëtos* runs along the Kama as far as the mouth of the Belaja river, and thence in a S.S.E. direction. Mr. Severtzov saw in the Museum of Orenburg many specimens of this Eagle obtained in the country of the Upper Belaja, Ik, and Sakmara, and from the southern Ural Mountains (as far south as lat. 52°). North of the above-mentioned limit *A. chrysaëtos* breeds everywhere as far as the limit of forest-growth; south from that limit it is only a rare stranger during its winter migration.

The third form of the Golden Eagle (*A. nobilis*) breeds throughout the woods of Middle Russia, and occasionally in the wooded country of Northern Russia as far as Mezen and lat. 60° in the Ural Mountains. Southwards it breeds as far as the Governments of Podolsk, Kiev, Poltava, Kharkov, Voronesh, and Saratov; but in all these places it is rare and local. East of the Volga it is a common breeding bird in

* Mr. Schalow has mis-stated the breeding-district of *Aquila fulva* as the Ural Mountains instead of the Carpathian Mountains (Journ. f. Orn. 1883, p. 410).

the forests between that river and the Ural Mountains, and probably breeds in some parts of the steppes between the Volga and Ural rivers. It does not breed in the steppes of New Russia, nor in the steppes between the Don and the Volga, but is found there during the winter, and is resident in the Crimea. According to Mr. Taczanovsky, twenty years ago this Eagle bred in Poland, but now is only a winter visitor to that country.

AQUILA IMPERIALIS.

The Imperial Eagle is essentially a lover of the plains near the large forests, and breeds only on the steppes of Russia; but occasionally it strays as far north as the central governments.

In the Ural Mountains this bird is found as far north as lat. 56° , breeding (on the authority of Mr. Martin) in the vicinity of Ekaterinburg. Mr. Pleske informs me that this Eagle is common in the district of Orenburg, and that in August 1872 he met with many specimens of it in the district of Sterlitamak (in the Government of Ufa). According to Eversmann it is common in the branches of the Ural and in the steppes near them, but according to Mr. Henke it is somewhat rare near Astrakhan. West of the Volga the Imperial Eagle is a common breeding bird in the Governments of Simbirsk, Saratov, Voronesh, Kharkov, Kiev, and Podolsk, as well as in the steppes of New Russia and in the Crimea.

As an occasional visitor the bird is found in the Governments of Riazan, Tula, Moscow, Tver, and Pskov, in the Baltic provinces, in Poland, and in Lithuania.

On migration the Imperial Eagle follows the great route from the Volga to the Lower Don, along the coasts of the Azov Sea, and along the northern and western coasts of the Black Sea. But we do not know any thing of its migration throughout South-eastern Russia, from the Ural Mountains to the mouth of the Ural river and along the coast of the Caspian Sea.

AQUILA ORIENTALIS, A. GLITSCHII, and A. BIFASCIATA.

According to Mr. Severtzov, throughout the steppes of Southern Russia and Western Asia two forms of the Steppe-Eagles breed, a third being found more to the east. These forms are *A. orientalis*, *A. glitschii*, and *A. bifasciata*.

A. orientalis.

Adult bird uniform dark brown, with the addition of a fulvous-coloured nuchal patch.

The first plumage of this Eagle is earth-brown, mottled with pale fulvous on the lower back, middle scapular region, little and middle wing-coverts, breast, and abdomen; the great wing-coverts and secondaries with large terminal patches of fulvous; the upper and lower tail-coverts fulvous. After the first moult the fulvous patches of all the feathers more or less disappear, with the exception of those on the greater wing-coverts and secondaries. After the second moult the plumage is nearly uniform, but double bars across the wing and traces of fulvous on the tail-coverts exist until the fourth moult, at which the bird receives its adult plumage.

A. glitschii.

Adult bird earth-brown, with the addition of a fulvous-coloured nuchal band and a pale fulvous band across the lower back; primaries, secondaries, and tail-feathers barred.

The first plumage of this Eagle is nearly uniform earth-brown, with terminal fulvous patches on some of the greater wing-coverts; secondaries and tail-feathers terminated with the same colour; tail-coverts fulvous, the lower irregularly barred with brown. After the first and second moults the bird becomes more and more uniform earth-brown; but a fulvous-coloured nuchal band and a pale fulvous band across the lower back are developed with the third and fourth moults.

A. bifasciata.

Adult bird earth-brown, with double bars on the wings and fulvous-coloured upper and lower tail-coverts; primaries, secondaries, and tail-feathers not barred.

The first plumage of this Eagle is earth-brown, with double bars on the wings, but without the patches on the other regions of the body; the second plumage is mottled with fulvous. After the third and fourth moults the bird becomes uniformly coloured, and receives its adult plumage, only with double bars on the wing.

I am indebted to the kindness of Mr. Severtzov for the following notes on the geographical distribution of the three above-mentioned Steppe-Eagles:—

“The geographical distribution of the three species of Steppe-Eagles, *Aquila orientalis*, *Aq. glitschii*, *Aq. bifasciata*, generally is such that each of those birds replaces in its *habitat* the others, their breeding-ranges being narrow regions going from W.S.W. to E.N.E. Also, if we travel from W. to E. (for example, from Ruschuk to Perovsk, across the Lower Danube, Dnieper, Don, Volga, and Syr), and from N. to S. (for example, from Troizk to Tashkent), we shall find the same succession of the regions of the three above-mentioned species of Eagles: at first we shall find the breeding-range of *Aq. orientalis*, after it that of *Aq. glitschii*, and at last that of *Aq. bifasciata*.

“*Aquila orientalis* breeds as far west as the country near the mouth of the Danube (Dobrudscha), from which I saw a nestling in the Museum of Vienna. Naumann received this species from the district of Dnieper, in the Government of Taurida. The original specimen of Cabanis, and many others, were obtained in spring and summer in the hills near the river Sarpa, beyond Sarepta. A specimen in my collection (♂ ad.) was obtained at the end of August near the Lower Ural river, at the fore-post Krasnojarsk; another, a young one, was found in the beginning of September more to the north, near Stanitga Sakharnaja. I also obtained a young specimen, and several times have observed the adult birds of this species in the steppes of the Government of Voronesh, in the district of Burreluk (in the Government of Samara), near the mouth of the Uy (lat. 55°), and near the river Irtysh, 150 versts from Semipalatinsk.

“I think there is no doubt that the Eagles supposed by Nordmann to be *A. nævia*, which breed on the ground throughout all the steppes of Southern Russia west of the Don, are not *A. nævia*: *probably* they are *A. orientalis*. But it is possible that Nordmann observed not only *A. orientalis*, but also *A. glitschii*, if this latter breeds west of the Don, regarding which we do not yet know any thing.

“On migration this species was observed in great numbers, together with *A. glitschii*, in the vicinity of Constantinople by Mr. Alléon, who erroneously named them *A. clanga*, Pall., and *A. naevioides*, Cuv.; but we do not know the winter-quarters of *A. orientalis*.

“*A. orientalis* has been once obtained in the Government of Moscow.

“*Aquila glitschii* was probably found by Gmelin in the steppes near the Lower Don; but Gmelin’s description being insufficient, we cannot be certain of the identification. Mr. Shatilov obtained a specimen of *A. glitschii* in the Crimea (♀, IX. 1854), probably on migration. It is numerous about the Sarpa, where it is more common than *A. orientalis*, with which it is mingled there. Mr. Artzibashev has furnished specimens of this Eagle from the steppes of Astrakhan. I have found and obtained specimens of *A. glitschii* in the steppes near the river Ural, as far north as 400 versts from the mouth, in the steppes near the river Emba, and in the country between the Syr-Darja and Turgai (meridian of Perovsk). A young specimen in my collection was obtained in the hills north of Kuldscha (lat. 73°); an adult specimen was furnished by Mr. Karelin for the Zoological Museum of Moscow from the river Ajaghuz (lat. 48°), and many others were obtained by General Kolpakovsky in Semirechje (now preserved in the Zoological Museum of Moscow).

“I infer from these facts that the breeding-range of *A. glitschii* extends from the Lower Don to the Black Irtysh, across the Lower Volga, Ural, and the middle portion of the Kirghiz steppes. From the river Ajaghuz its principal breeding-range extends throughout the breeding-range of *A. bifasciata*, along the foot of Tarbagatai, Barlyx, Simirechensky Alatau, and Erin-khabargha as far as Kuldscha.

“On migration this Eagle was observed by Mr. Alléon near Constantinople (the route to the Don and the Volga). I found it on the route of migration which goes round the northern and western foot of the Tian-shan, from Aulje-ata across Tchimbkent to Tashkent; and probably it is the same species that I observed on migration across Karakum, near

the north-eastern angle of the Aral Sea ; but in the distance I could not distinguish it from *A. clanga*.

“I have a specimen of *A. glitschii* obtained by Mr. Anderson in winter between the Sutluj and Ganges, near the southern foot of the Himalaya ; it is very like that obtained in the Kirghiz steppes north of Perousk ; but we do not know any thing more of the winter-quarters of *A. glitschii*, though it doubtless winters west of North-western India.

“*Aquila bifasciata* was not found by me west of the Aral Sea. I saw many young specimens dead which had been taken from nests near the stations of the route from Orenburg to Tashkent, near the north-east angle of the Aral Sea, and near Dschulek (on the Syr-Darja, 600 versts from the mouth). The specimens in my collection were obtained during migration near Aulje-ata, Tchimkent, and Tashkent, but I did not find this Eagle during the summer in the steppes near the foot of the Tian-shan. The nests, which I know, were found in the bushes of saxaul near the Syr, and more to the north, near the north-eastern angle of the Aral Sea. Probably it breeds also near the Tohu ; and Colonel Prjevalsky has found this Eagle in summer sparingly distributed throughout the bushes of saxaul in the Alashan and near the frontier of China.

“On migration I have several times obtained *A. bifasciata* at Aulje-ata, Tchimkent, also more southwards near Tashkent, and on the Lower Amu.

“This Eagle winters in Northern India, whence I have specimens obtained by Mr. Anderson. By Colonel Prjevalsky it was found during the winter in the high steppes near the Lake Khu-khu-nor, where it is very cold, but snowless ; there it feeds on *Lagomys* and the other species of *Glîres*.”

AQUILA CLANGA.

The Larger Spotted Eagle breeds throughout the wooded districts of Russia from lat. 60° as far south as the southern limits of forest-growth. A specimen of this bird was obtained

by Mr. Paljakov near Lake Onega, but it only occasionally straggles to that northern country. According to Mr. Russov it is a rare breeding bird in the Baltic provinces, where its more western representative, the Lesser Spotted Eagle, is more common. In the Governments of Tver, Jaroslav, Moscow, Tula, and Orel, the Larger Spotted Eagle is more common, and it is very common in the woods of Eastern Russia, from the Oxa river to the Ural Mountains. In the Ural Mountains and their branches the bird is found from lat. 60° to lat. 55° , but generally its southern breeding-limit in Russia is but little known. On the wooded islands of the Volga it breeds as far south as lat. 50° , and probably still more to the south. According to Mr. Severtzov it is a breeding bird in the forests of the river-valleys in the Government of Voronesh. More to the south-west it is probably a rare breeding bird in the Government of Kharkov, and, without doubt, breeds in the woods of the Government of Kiev; but in the steppes of New Russia it is replaced by *Aquila orientalis*. In Western Russia, from the Upper Dnieper to Poland, it breeds everywhere, but is rare.

AQUILA NÆVIA.

The Lesser Spotted Eagle is met with only in the western parts of Russia; it is a very typical member of the avifauna of Western and Southern Europe, and generally is found in the same country as the Common Buzzard, the Red Kite, and the Barn-Owl.

According to Mr. Mela the Lesser Spotted Eagle is a rare occasional visitor to the eastern shores of the Gulf of Bothnia. My friend Mr. Pleske informs me that this bird has been once found in the district of Vyshny-Voloschok (in the Government of Tver). It is more common in the Governments of Pskov and St. Petersburg, and breeds everywhere in the Baltic provinces. According to Mr. Taczanovsky it is a breeding bird in Poland, and, on the authority of Mr. Pleske, is common and breeds in the Government of Grodno. More to the south it breeds in the Governments of Podolsk, Kiev, and in Bessarabia, and probably in the whole wooded country

between Lake Peypus and the Upper Dnieper. In all the above-mentioned localities the Lesser Spotted Eagle breeds together with its somewhat larger representative, *Aquila clanga*; but it is more and more rare in proportion as it recedes from the shores of the Baltic Sea, and the eastern race is, on the contrary, more and more rare in proportion as it approaches it.

The Lesser Spotted Eagle is sedentary only in the southwestern parts of Russia.

Mr. Kalenichenko informs us that *Aquila nœvia* is found "rariter in montibus Tauriæ ad Czatyrdach." I have not seen a specimen of the Spotted Eagle from the Crimea; but it is not impossible that it is really the Lesser Spotted Eagle that breeds in the mountain-woods of that peninsula, as it is this and not the other species which has been obtained in the Caucasus*.

AQUILA BONELLII.

Bonelli's Eagle is only a very rare and accidental visitor to the southern parts of Russia.

According to Mr. Nordmann it was once met with near Odessa. Mr. Severtzov informs us, on the authority of one of his friends, that this bird has been found in the Government of Voronesh. An example of it has been obtained near Sarepta.

Mr. Goebel tells us that a specimen of Bonelli's Eagle was observed by him in the district of Uman (in the Government of Kiev); but this specimen was not obtained, and "die leuchtenden Schulterflecken," mentioned by Mr. Goebel, give us very great doubts in deciding whether the observed bird was really a Bonelli's Eagle.

* Mr. Seebohm informs us (Ibis, 1883, i. p. 3) that in the mountain-valleys of the northern slopes of the Caucasus the Larger Spotted Eagle breeds. But, according to Mr. Bogdanov, in the above-mentioned country the Lesser Spotted Eagle breeds; and Mr. Severtzov, the most competent judge of the identification of the Eagles, told me that the specimen in Bogdanov's collection was really *Aquila nœvia*, and not *Aquila clanga*. But two males in Mr. Seebohm's collection from Lenkoran are unquestionably *A. clanga*.

AQUILA PENNATA and AQUILA MINUTA.

I think that *Aquila pennata* is distinct from *Aquila minuta*, with which it, however, regularly interbreeds.

The Booted Eagles are not uncommon in Southern Russia, but are very local in the central part of that country.

According to Mr. Kaplick they are found in the district of Tikhria (in the Government of Novgorod). I once found the Booted Eagle in the Government of Tula. Mr. Severtzov informs me that, on the authority of Mr. Bakunin, this bird was probably observed in the Government of Kazan, near the limit of the district of Bugulma. According to Mr. Sabaneev they are found in the Ural Mountains south of lat 57°. They probably breed in the wooded parts of the country between the Volga and the Ural rivers, and doubtless also in the Governments of Voronezh, Kharkov, Kiev, Podolsk, and Vollandia, where they are not uncommon. Mr. Taczanovsky records these birds as being rare in Poland. In the south of Russia Booted Eagles have been observed in the wooded districts of the steppes of the Black Sea, as well as in the Crimea, and doubtless breed in both localities.

Mr. Karelin has obtained this species near Guriev at the end of August (old style), probably on autumn migration. It is common on spring and autumn migration in the Crimea, especially in the autumn.

HALIAETUS ALBICILLA.

The White-tailed Eagle is a more or less common breeding bird throughout the whole of Russia, with the exception of the central governments, where it is very rare. The northern examples of this bird migrate south during the autumn to Southern Russia, where they meet with the resident birds of the latter country, and consequently the White-tailed Eagle is very common during the winter in Southern Russia. It is not uncommon also during the winter in Western and South-eastern Russia, but is very rare more to the north.

HALIAETUS LEUCORYPHUS.

Pallas's Sea-Eagle is doubtless found in South-eastern

Russia along the coasts of the Caspian Sea, but its western limit is somewhat difficult to trace.

According to Mr. Severtzov, Pallas's Sea-Eagle is to be met with in the steppes of the Caspian Sea as far north as Uralsk and Busuluk (the Samara river). It is very common near the Lower Ural river, especially between the Kalmikova and the sea; but, on the authority of Mr. Severtzov, in the Caspian steppes there is no place where it regularly breeds. According to Mr. Henke, Pallas's Sea-Eagle is occasionally found on the steppes of the Lower Volga, where it breeds *on the ground*. This bird was once seen by Bogdanov at the end of September in the delta of the Terek. According to Col. Irby it is common in the interior of the Crimea, but is not seen among the rocks by the coast. This bird bred, on the authority of Col. Irby, in two instances, *on trees* close to the Kacha river; but I have never seen any example of Pallas's Sea-Eagle in collections of birds from that country, and never observed it during my two journeys in the Crimea. Mr. Kalenichenko states that it is a rare bird in the Government of Kherson, near the Bug, and along the coasts of the Black Sea. Mr. Nordmann supposes that he has had a young bird of this species from the Bug; and a probable instance of its having nested still further westward, in the Pravidy valley, Bulgaria, has been recorded by Mr. Farman. But Messrs. Elwes and Buckley did not observe Pallas's Sea-Eagle in Turkey, though they searched all the localities Mr. Farman mentions; and Mr. Alléon did not obtain it, either near Constantinople or in the Dobrudscha.

MILVUS REGALIS.

Like the Common Buzzard, the Red Kite is a bird exclusively confined to the western Palearctic Region. It is rare in Russia, where it is found only in the western and south-western parts of the country.

It breeds in Livonia and Western Courland, but it only occasionally occurs in Esthonia. Mr. Taczanovsky records the Red Kite as being common and migratory in Poland, and this bird probably breeds in the district of Belsk (in the

Government of Grodno) ; but it is a very rare accidental visitor to Central Russia, being found there only as far east as the Governments of Tula and of Orel. In the southern portions of Russia the Red Kite doubtless breeds in the district of Uman (in the Government of Kiev), in the district of Balta (in the Government of Podolsk), near the Dnieper, and generally in the steppes of the Black Sea west of the Dnieper. In the last-mentioned part of Russia and in Bessarabia the Red Kite is very common, though it is seen but rarely in the Crimea.

Mr. Severtzov, in his 'Fauna of the Government of Voronesh,' says the Red Kite was observed by him several times in that country ; but Mr. Severtzov now tells me that he was probably mistaken, and that the Red Kites of his 'Fauna' were only rufous and deeply forked-tailed examples of *Milvus ater*. Pallas says the Red Kite winters on the Lower Volga ; according to Eversmann it occasionally occurs about the lower part of this river ; and Mr. Sabaneev states that he has seen several Red Kites, amongst hundreds of *Milvus ater*, flying towards some dead animals in the Kaslinsky Ural. But it is a mistake : no one has ever seen Red Kites in the country between the Government of Tula, the Ural Mountains, and the Lower Volga ; not one skin of *Milvus regalis* has ever been obtained from Russia east of the Don.

"Kites were observed at Cholmogory and elsewhere, usually near towns and villages," Messrs. Alston and Harvie Brown inform us, in their 'Notes from Archangel.' "We did not obtain any specimens, but believe them to have been of this species (*M. regalis*), which was the one procured by Lilljeborg and Meves." I ought to say that Messrs. Lilljeborg and Meves procured in North Russia only *Milvus ater* ; and as *Milvus regalis* certainly does not exist in Finland, I think the *Milvus regalis* of Messrs. Alston and Harvie Brown is really our common *Milvus ater*.

MILVUS ATER.

The Black Kite is very common throughout the whole of

Southern and Central Russia, and is not uncommon in the middle portion of Northern Russia, from the Upper Volga to Archangel, and from Lake Onega to the Dvina. In Finland it is only an occasional visitor to the northern and north-eastern shores of the Gulf of Finland, and was never obtained in any other part of the country, being very rare near the western coast of Lake Onega. From the Dvina to the Ural Mountains its breeding-limit is unknown; but in the last-mentioned mountains it is found as far north as the Bogoslovsky Ural.

Eastwards from the Ural Mountains the Black Kite is found as far as Semirechje; but, on the authority of Mr. Severtzov, it is rare in that country in comparison with *Milvus govinda*, which is distributed as far west as the Ural Mountains. The proportionate number of the two species in the country between the Ural Mountains and Semirechje is distinctly contrasted, *Milvus govinda* being rare near the eastern slopes of the Ural, and becoming more and more common as it approaches Semirechje; *Milvus ater* being common in the Ural and near it, but becoming more and more rare in proportion as it retreats from the same country.

In the Ural Mountains, amongst the typical specimens of the Black Kite are found many specimens of a Kite with intermediate characters between the two extremes—*Milvus ater* and *M. govinda*; and a specimen of the same character was obtained in the Government of Kostroma, where *Milvus govinda* had never been found. East of the Ural Mountains are found specimens which are between the intermediate form and one of the two extremes, *Milvus govinda*; but specimens between the intermediate form and the other extreme, *Milvus ater*, have never been obtained, though the latter is distributed throughout that country as well as its more eastern representative. On that ground it is very possible that these specimens are not produced by the interbreeding of the two extremes, but represent the not extinct intermediate form between *Milvus ater* and *Milvus govinda*, which are only subspecifically distinct.

In the western parts of Russia the Black Kite breeds,

together with the Red Kite, but is very rare in some districts of that country. In the Baltic provinces it nests in the eastern part of Livonia, and is a rare breeding bird in Courland ; but it is only occasionally found throughout the other parts of the country, where the Red Kite is more common. In Poland, according to Mr. Taczanovsky, the Black Kite is more common east of the Vistula, and the Red Kite, on the contrary, is more common west of that river. More to the south, in South-western Russia, and near the northern coast of the Black Sea, the bird generally is common, but in the Crimea it is found only on migration.

MILVUS GOVINDA.

Since the publication of my 'Ornithological Geography' I have seen a very typical specimen of *Milvus govinda* from the Serebrianka river (in the Government of Perm), and we shall probably be obliged to enlarge the breeding-range of this Kite as far west as the western slopes of the Ural Mountains. This bird has been found throughout the whole country from Semirechje to the last-mentioned mountains.

On migration *Milvus govinda* has been obtained several times by Mr. Alléon on the Balkan peninsula.

MILVUS GLAUCOPUS.

The Blue-footed Kite was discovered by Eversmann. In colouring and dimensions it is a very near relative of *Milvus govinda*, from which it can be easily distinguished by having blue feet and a blue cere. Mr. Severtzov supposes it is an atavistic form of *Milvus govinda*.

We know at present of but very few specimens of this bird, obtained in the Government of Orenburg, in Ust-Urt, and about the Lake Zaysan.

ASTUR PALUMBARIUS.

The Goshawk is distributed throughout almost the whole of Russia, from the limit of forest-growth in the north to the Black Sea, the Caucasus, and the Caspian Sea in the south. Generally it is nowhere very common ; but in the central and northern governments it is more common than in the other

parts of the country, but is very rare near its northern breeding-limit and in Southern Russia.

It is resident in every part of its breeding-range, with the exception of the extreme north, where it is partially migratory. In North-east Russia, from the Government of Kostroma to the Ural Mountains, and probably more east, amongst the typical specimens of the Goshawk are found birds with a more or less developed white colour. Some specimens of this variety are all over of a very light colour, almost white; others, being generally of the normal grey, have large white spots on different parts of their plumage. This albinoid variety is probably produced by the difference of climate of North-eastern Russia in comparison with that of Western Europe; and I think these more or less white specimens show us that the same relation exists between *Astur palumbarius* and *Astur candidissimus* as between *Pæcile palustris* and *Pæcile kamtschatkensis*, *Picus major* and *Picus major kamtschatkensis*, *Picus minor* and *Picus minor kamtschatkensis*, &c.

ASTUR BREVIPES.

The breeding-range of the Levant Sparrow-Hawk in Russia appears to be very little known.

On the authority of Mr. Karelin it is rare in the country about the Ural river; and Mr. Henke tells us that it is occasionally found breeding in the poplars in the vineyards near Astrakhan. According to Mr. Severtzov it breeds and is a partial resident in the Government of Voronesh. I think I have seen the Levant Sparrow-Hawk several times in the Crimea, on the south coast, in July and August of 1882; but as it was not obtained, it was impossible to identify the bird.

According to Mr. Severtzov it is found during the autumn migration near the mouth of the Ural river.

ACCIPITER NISUS.

Like the Goshawk, the Sparrow-Hawk is distributed throughout the whole wooded country of Russia, but is a more regular visitor than that bird. The northern examples do not pass the winter in their breeding-range and regularly

migrate southwards during the autumn; those from Middle Russia are only partially migratory, a few remaining there throughout the whole winter; and in Southern Russia the bird is rare during the summer, and is more common on migration and in the winter.

Generally the Sparrow-Hawk is more common everywhere than the Goshawk, and is very common in some parts of Central Russia. According to Mr. Shatilov it is resident in the Crimea.

STRIGICEPS CYANEUS.

The Hen-Harrier is distributed throughout the whole of Russia as far north as lat. 68° and 69° , but is very rare near its northern breeding-limit, and is more common only south of lat. 62° . This bird is very common in Central and Southern Russia.

In the steppes near the Lower Ural river, the Lower Volga, in the steppes of New Russia, and in the Crimea, the Hen-Harrier is found during the whole winter.

STRIGICEPS PALLIDUS.

The Pallid Harrier breeds only throughout the southern parts of Russia, but as an irregular straggler it is found further north. According to Mr. Sabancev, it is found in the steppes south of Ekaterinburg; and Mr. Pleske informs me that this bird is common in the district of Orenburg. On the authority of Mr. Karclín it is found in the steppes near the Ural river, and by Mr. Bogdanov it was observed in the district of Balashev (in the Government of Saratov), in the Government of Stavropol, and in the valleys of the Terek and Kuban. It is not uncommon in the Government of Voronezh, is found in the Government of Kiev and near the border of the Government of Kherson, and breeds throughout all the steppes of the Black Sea. According to Mr. Schatilov it occurs in the Crimea; and Mr. Henke tells us that a few specimens of this species are found all the year round at Astrakhan. At the end of summer I have several times obtained young specimens of the Pallid Harrier in the Governments of Orel and Tula, and Mr. Lorenz has furnished me with

specimens from the Government of Moscow ; but I think it does not breed there, because not one adult specimen has been obtained by us in these localities.

According to Mr. Mela it is a very rare and accidental visitor to the northern coast of the Gulf of Finland.

STRIGICEPS CINERACEUS.

Montagu's Harrier is found in all parts of Southern and Middle Russia. In the Ural Mountains it is distributed as far north as Ekaterinburg ; in the country between Ekaterinburg and the mouth of the Kama its northern breeding-limit is unknown, but it is a common breeding bird in the district of Birsik (in the Government of Ufa). According to Mr. Bogdanov it is found in the Government of Kazan. On the authority of Mr. Pavlov, Montagu's Harrier is a rare breeding bird in the Government of Riazan. In the country adjoining the Government of Moscow the bird is rare, though it breeds everywhere in suitable localities. According to Mr. Russov it breeds in the Baltic provinces. Generally its northern breeding-limit in Central Russia is represented by the Volga from the mouth of the Kanin to the mouth of the Mologa. In the country between the mouth of the last-mentioned river and the Gulf of Finland the northern breeding-limit of Montagu's Harrier is unknown ; but the species is found rarely in the Governments of Tver and St. Petersburg, and strays as far the northern coast of the Gulf of Finland.

A few examples of this bird are found all the year round in the steppes of Southern Russia and in the Crimea.

CIRCUS ÆRUGINOSUS.

The Marsh-Harrier is distributed throughout the whole of Russia as far north as Archangel, with the exception of Lapland, Finland, and the north-eastern country from the Dvina to the Ural Mountains, but it is rare north of the Volga. In the Ural Mountains its northern breeding-limit is about lat. 58°. In some parts of Middle and Southern Russia this bird is very common. In the steppes of Southern Russia a few Marsh-Harriers are found all the year round.